



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
08/712,891	09/12/96	CANNATA	R 14064.00010
B5M1/0307			EXAMINER
DAVID L HENTY GRAHAM & JAMES 801 SO FIGUEROA STREET 4TH FLOOR LOS ANGELES CA 90017-5434			FIELD NO. ART UNIT PAPER NUMBER 2506 DATE MAILED: 03/07/97

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

#### OFFICE ACTION SUMMARY

- ☐ Responsive to communication(s) filed on \_\_\_\_\_
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

- ☒ Claim(s) 1-57 is/are pending in the application.
- ☐ Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1, 5-7, 9-13, 21-23, 25-32, 38-44, 46-57 is/are rejected.
- ☒ Claim(s) 2-4, 8, 14-20, 24, 33-37, 45 is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948, <sup>substitute</sup>
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

- ☒ Notice of Reference Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948, <sup>substitute</sup>
- ☐ Notice of Informal Patent Application, PTO-152

-SEE OFFICE ACTION ON THE FOLLOWING PAGES-

The claims are misnumbered because there is no claim 45. Accordingly, claims 46-58 have been renumbered as claims 45-57, respectively.

Claims 5, 6, 25028, 48 and 50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, it is not clear what is meant by "binary values separately".

In claim 25, microbolometers should be microbolometer detector elements.

Claim 26 lacks proper antecedent basis for said microbolometer.

Claim 48 lacks proper antecedent basis for "the timemultiplexed readout".

In claim 55, amplification should be amplifying to provide proper antecedent basis.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 7, 10, 11, 21, 23, ~~42-44~~, 46, 49, 50 and 53-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Lung.

Lung provides offset correction by sampling signals at first and second time intervals with a sampling capacitor and subtracting the two signals. The sampling capacitors comprise means for storing a plurality of offset correction values corresponding to the plurality of elements.

Claims 9,12,13,22,25,29-32,38-41,47,48,51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lung.

It would have been obvious to facilitate assembly and maintenance by providing the detector array and readout circuit as a single monolithic integrated circuit. The use of output buffers would have depended on the intended applications. It would have been obvious to enhance versatility by providing means to adjust the reference voltage for the differential amplifiers. Use of a fixed voltage source for biasing is conventional.

Claims 1,5,6,12,21,22,53 and 56 are rejected under 35 U.S.C. 102(e) as being anticipated by Masarik et al (see col. 4, lines 54-57 and figures 2b and 6).

Claims 9,10,13,25,29-31,38,41,54,55 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masarik et al.

It would have been obvious to simplify assembly and maintenance by structurally integrating the detector elements and readout circuit. The Marsarik et al focal plane array uses pyroelectric detectors, but it would have been obvious that their techniques of offset correction would apply to other types of infrared detectors used in a focal plane array, with the type of readout circuit used being dependent on the type of detector. They amplify detector signals before correcting, but it would have been obvious that the amplification step could have been provided after the correction, with such being an obvious design choice.

Serial Number: 08/712,891  
Art Unit: 2506

-5-

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nishita shows other teaching of using a memory to store offset correction data.

Claims 2-4,8,14-20,24,33-37 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

✓ Claims 26 and 27<sup>and 28</sup> would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112 set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Examiner Fields at telephone number (703) 308-4860.

Fields/jm

March 5, 1997

*Carolyn E. Fields*  
**CAROLYN E. FIELDS**  
**EXAMINER**  
**ART UNIT 256**